

We claim:

- Sub A1
1. A method of selectively reducing the number or activity of macrophages, comprising contacting the macrophages with a macrophage-binding compound comprising (a) an agent which binds to an Fc receptor; and (b) an agent which kills or reduces the activity of the macrophages. 598 1493
- Sub C1
2. A method of treating or preventing a disease in a subject characterized by aberrant activity or number of macrophages within a selected area of the subject, comprising locally administering to the area a macrophage-binding compound comprising (a) an agent which binds to an Fc receptor; and (b) an agent which kills or reduces the activity of the macrophages.
- Sub A2
3. The method of either of claims 1 or 2, wherein the portion which binds to an Fc receptor binds at a site which is not bound by an endogenous immunoglobulin.
4. The method of either of claims 1 or 2, wherein the Fc receptor is an Fc γ receptor (Fc γ R) or an Fc α receptor (Fc α R).
5. The method of claim 4, wherein the Fc γ receptor is selected from the group consisting of Fc γ RI, Fc γ RII and Fc γ RIII.
6. The method of claim 5, wherein the Fc γ receptor is a human Fc γ RI.
7. The method of claim 4, wherein the Fc receptor is a human Fc α R.
8. The method of either of claims 1 or 2, wherein the macrophage-binding compound comprises an anti-Fc receptor antibody conjugated to a toxin.
9. The method of claim 8, wherein the anti-Fc receptor antibody is an anti-Fc γ receptor antibody or a fragment thereof.
10. The method of claim 9, wherein the anti-Fc γ receptor antibody is a monoclonal antibody selected from the group consisting of mab 22, 32 and 197, or a fragment thereof.

11. The method of claim 9, wherein the anti-Fcγ receptor antibody is a humanized antibody H22 produced by the cell line having ATCC accession number CRL 1117 or a fragment thereof.

5

12. The method of claim 8, wherein the toxin is selected from the group consisting of Gelonin, Saporin, Exotoxin A, Onconase and Ricin A.

10 13. The method of claim 1, wherein the agent which kills or reduces the activity of the macrophages is encapsulated within a liposome.

del
CL
14. The method of claim 13, wherein the agent which kills or reduces the activity of a macrophage is dichloromethylene diphosphonate (CL2MDP) or derivatives thereof.

15

15. The method of claim 13, wherein the agent which binds to an Fc receptor is a single chain antibody.

20 16. The method of claim 13, wherein the agent which binds to an Fc receptor is an anti-Fcγ receptor antibody or a fragment thereof.

17. The method of claim 13, wherein the agent which binds to an Fc receptor is a single chain anti-Fcγ receptor antibody or a fragment thereof.

25 18. The method of claim 1, wherein the contacting step occurs in culture. *method*
step

19. The method of either of claims 1 or 2, wherein the macrophage-binding compound is administered topically, intradermally or subcutaneously in a pharmaceutically acceptable carrier.

30

20. The method of claim 2, wherein the disease is characterized by enhanced proliferation and/or growth factor secretion of the macrophage.

35 21. The method of claim 2, wherein the disease is selected from the group consisting of psoriasis, atopic dermatitis, scleroderma, cutaneous lupus erythematosus, Human Immunodeficiency Virus infection, multiple sclerosis, rheumatoid arthritis, Chronic

09251570, 021799

Polymorphic Light Dermatitis, Chronic Obstructive Pulmonary Diseases, and Wegener's Granulomatosis.

22. A method of diagnosing a disease in a subject characterized by aberrant numbers
5 or activity of macrophages, comprising:

contacting a biological sample from the subject with a macrophage-binding compound comprising an agent which binds to an Fc receptor; and

detecting the level of Fc receptor binding as an indication of the amount of Fc receptor protein in the sample,

- 10 wherein elevated expression of the Fc receptor protein, or an increase in the number of macrophages expressing the Fc receptor protein, is indicative of a macrophage-mediated disease.

23. The method of claim 22, wherein the macrophage-binding compound further
15 comprises a detectable label.

24. The method of claim 22, wherein the Fc receptor protein expression is detected by autoradiographic, colorimetric, luminescent or fluorescent detection.

- 20 25. The method of claim 22 wherein the disease is selected from the group consisting of psoriasis, atopic dermatitis, multiple sclerosis, scleroderma, cutaneous lupus erythematosus, Human Immunodeficiency Virus infection, Chronic Polymorphic Light Dermatitis, Chronic Obstructive Pulmonary Diseases, and Wegener's Granulomatosis.

09251570.021799